PATENT SPECIFICATION
Inventor: BERG, William L.
Atty Docket: B044 P00773-US1

PICTURE FRAME ASSEMBLY WITH INTEGRATED PICTURE STORAGE

CROSS-REFERENCE TO RELATED APPLICATIONS

[01] This application is related to and claims priority from earlier filed provisional patent application No. 60/440,114, filed January 15, 2003.

BACKGROUND OF THE INVENTION

[02] The present invention relates to a new picture frame display assembly that includes integrated storage of multiple pictures. More specifically, this invention relates to a picture frame assembly that includes a unique picture storage component that facilitates its use with standard or interchangeable picture frame display elements while providing convenient storage for multiple pictures.

[03] Currently, conventional picture frames allow for the storage and display of only one picture at a time. The difficulty with these single picture display devices is that often the picture frame user may have multiple pictures of the same event or several pictures of a similar pose that are all related. In these cases, should the user wish the alternate pictures to be available for quick access and viewing, they must store them near the framed single picture. This storage may result in the user having to place a stack of pictures adjacent the framed picture. Generally, this is not an acceptable solution because it requires that several loose pictures be left on a table near the picture frame causing a cluttered appearance.

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[04] In the prior art, typical solutions for providing the desired storage for multiple related pictures include the use of photo albums. However, while albums effectively provide desirable storage for several pictures, they are not particularly adapted for full time display of a particularly meaningful photograph. In an attempt to overcome these issues, several other prior art devices have attempted to integrate the type of storage provided in a photo album with a display feature. For example, U.S. Patent No. 6,553,704, issued to Pigg, discloses a picture frame assembly for supporting and storing a number of pictures, wherein the frame is constructed to include a plurality of slots along one side into which a plurality of picture support members are placed. In this manner, a plurality of pictures can be stored within the frame while one is chosen to be placed into the front slot for display.

[05] Another general type of prior art device includes frames that receive a stack of pictures wherein a spring member presses the stack against the viewing window to facilitate the display of the picture on the top of the stack. For example, U.S. Patent No. 4,774,779, issued to Ackeret, provides a picture frame that holds a stack of pictures. The edges of the frame are formed in such a manner so as to act as a clamp to firmly hold any size stack of pictures with the top picture thereof firmly retained against the viewing window. Additionally, U.S. Patent No. 5,095,641, issued to Dahl discloses a picture frame that is formed as a box for receiving a stack of pictures with the one to be displayed on top. The back of the frame includes a spring clip to firmly hold the stack in place against the display glass. Also of interest is U.S. Patent No. 5,167,085, issued to Yang, which discloses a picture frame that includes a storage box therein for holding a plurality of pictures. The cover of the storage box is retained using

a magnet and the frame element then folds into place over the storage box to display the picture that is placed at the top of the storage box.

[06] Finally, other frame devices exist wherein a stack of photographs is loaded into a storage compartment and a mechanical slide assembly is operated to shuffle the deck changing from one photo to another in sequential order.

[07] The difficulty with all of these mechanical type frames described in the prior art is that they are generally more functional than attractive. Further, they are typically formed from molded plastic and do not have a desirable appearance for display around the home or office. These drawbacks create a need for a picture display and storage device that is well suited for storing multiple pictures in a protected and easy to display manner while providing an attractive and aesthetic appearance that the user finds acceptable for display in their home.

BRIEF SUMMARY OF THE INVENTION

[08] In this regard, the present invention provides a picture frame assembly that includes a novel two part storage box assembly. In the preferred embodiment of the present invention the storage box is mounted to the back of a conventionally manufactured picture frame. In this manner, the storage box assembly can be easily utilized with any conventional picture frame while also allowing for the user to remove and exchange the display portion of the frame as desired. Further, removal of the picture frame portion from the storage box provides access to a removable photo sleeve that is configured for storing and displaying multiple pictures in a bound form that is stored on the interior of the device.

[09] In a first preferred embodiment, a front mounting flange is provided that is configured to be attached to the back surface of a conventional picture frame. The mounting flange is mounted to the rear of the frame using any suitable fastener means such as adhesives or mechanical fasteners as are already well known in the art. The rear portion of the assembly is formed as a box that includes mounting channels that interface with the front mounting flange for attachment of the box to the picture frame. The back surface of the box includes the typical hanging hardware or retractable easel stand portions normally found on the back of standard picture frames. The box portion is particularly suited to receive and store a sleeve of photographs in a convenient and concealed manner that facilitates user access if desired while protecting the photographs and containing them in an organized fashion when not in use. The photo storage sleeve can be accessed by removing the storage box. Additionally, a slot may be provided in the side of the box to allow the sleeve to be accessed without removing the box from the frame.

[10] A further benefit to the present invention is that the picture frame element is maintained in its original configuration allowing the conventional placement and display of a particularly desirable photograph. Also, since the original picture frame is not modified, manufacturers can offer this feature as an add-on to their existing line of frames without modifying their current production lines or creating specialized production lines for this assembly. Additionally, in this manner, the end user of the present invention can employ the storage device with a frame that they already own or with a frame that is particularly suited to their personal aesthetic tastes.

[11] In a second embodiment, the present invention is formed using a front section wherein extrusions are formed to include both ornamental frame display surfaces and receiver flange surfaces at the rear thereof. This extrusion is then formed into a picture frame with a display glass installed into the front thereof. The storage box as described above includes receiver channels that mate with the receiver flange on the rear of the frame extrusion wherein the storage box is slideably received in mating relation to the frame assembly. The two components cooperate to form an enclosed cavity therebetween to receive a sleeve configured to contain and store multiple photographs therein while selectably displaying one of the photographs placed in the sleeve prominently in the glass covered opening in the front portion of the frame. In this manner, several pictures can be stored in a single frame while allowing the user to easily change the single picture that is going to be displayed at any given time.

[12] Further, since the box hardware as described in the second embodiment forms a cavity within the body of the frame, the present invention is also suitable for use as a display assembly for three-dimensional keepsakes in a shadow box manner. When used in this fashion, the items to be displayed are affixed on the interior of the rear portion of the box before the frame is assembled.

[13] Accordingly, one of the objects of the present invention is the provision of an assembly for storing several photographs while including an integrated display area for a single photograph. Another object of the present invention is to provide an assembly for attaching to a picture frame to provide convenient storage of photographs. Yet another object of the present invention is the provision of an assembly that can be mounted to a conventional picture frame without any required modification to create an

integrated storage area for several photographs. Another object of the present invention is to provide a conventional picture frame with a storage box adjacent the rear of the frame.

[14] Other objects, features and advantages of the invention shall become apparent as the description thereof proceeds when considered in connection with the accompanying illustrative drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[15] In the drawings which illustrate the best mode presently contemplated for carrying out the present invention:

Fig. 1 is a perspective view of the picture frame with integrated storage assembly of the present invention;

Fig. 2 is an exploded perspective view from the rear of the present invention;

Fig.3 is a perspective view from the rear of the present invention with the storage box in position to be slideably received;

Fig. 4 is a cross sectional view thereof taken along line 4-4 of Fig.1; and

Fig. 5 is a cross sectional view of an alternate embodiment thereof taken along line 4-4 of Fig.1.

DETAILED DESCRIPTION OF THE INVENTION

[16] Referring now to the drawings, the picture frame and integrated storage assembly of the present invention is illustrated and generally indicated at 10 in Figs. 1-4. Further, an alternate embodiment showing an alternative means for fabricating the present invention is illustrated and generally indicated at 100 in Fig. 5. The picture frame storage assembly 10 of the present invention, as will hereinafter be more fully described, includes a picture frame display 12 and a storage compartment assembly 14 that is received and retained adjacent the rear surface 16 of the picture frame 12.

[17] Turning to Fig. 1 in combination with Fig.4, the picture frame portion 12 of the present invention in the first and preferred embodiment is intended to be of conventional construction. The picture frame 12 can be seen to include a peripheral frame member 18 that is generally shown as an extruded rail or a picture frame molding. The peripheral member 18 may be formed from an extruded or rolled metallic material such as aluminum or steel. Further, the peripheral member 18 may also be formed from a milled or embossed wood, a urethane composite or any other suitable material known in the relevant art. The peripheral frame member 18 includes an aperture 20 formed therein that is configured to display an object of interest. Preferably the aperture 20 is configured to display a photograph 22. Further as is known in the picture frame art, a clear cover 24 is provided at the front of the aperture 20 to protect the item displayed therein. The clear cover 24 may be either glass or any other suitable clear sheet product. Additionally, a backer 26 is provided that is installed behind the picture 22 to sandwich the picture 22 to be displayed between the backer 26 and the clear cover sheet 24 thereby retaining the picture in the proper position for display. It is

preferable that the construction of the picture frame 12 be conventional and not require any modification to be utilized in the present invention.

[18] Turning now to Figs. 2, 3 and 4, the storage assembly 14 and means for attaching the storage assembly 14 to the picture frame 12 is shown. As can be clearly seen, the storage assembly 14 can be attached to the rear surface of any conventional picture frame 12 as described above. The storage assembly 14 is essentially a box having a rear wall 28 and a side wall 30 extending upwardly therefrom to define an interior cavity 32. The interior cavity 32 is ideally suited for placement of certain keepsakes or preferably a stack of pictures 34 for easy access and viewing. The storage assembly 14 is slidably attached to the rear surface 16 of the picture frame 12. In the preferred embodiment, mounting rails 36 are first fastened to the rear surface 16 of the picture frame 12. The mounting rails 36 are placed in parallel spaced relation and fastened to the rear surface 16 of the frame 12 using any fastening method already known in the art. The storage assembly 14 includes corresponding receiver channels 38 extending from to parallel edges of the sidewalls 30. The receiver channels 38 are ideally formed integrally with the sidewall 30 themselves. The receiver channels 38 and the mounting rails 36 are configured it interfit with one another and allow the storage assembly 14 to be attached to the rear surface 16 of the picture frame 12 by sliding the storage assembly 14 onto the frame 12 as indicated by the directional arrow in Fig. 3 with the receiver channels 38 engaging the mounting rails 36. Additionally, the rear surface of the rear wall 28 of the storage assembly 14 includes hanging tabs 40 and/or an easel stand 42 to facilitate hanging or placement of the assembly 10 in a display location.

[19] It should be appreciated that the storage assembly 14 can easily be mounted to the rear of any conventional picture frame 12 assembly. This addition can be made during the manufacture and assembly of the frame 12 by the original manufacturer or can be sold separately to consumers. In this manner, the storage assembly 14 would be manufactured as an add-on kit that is installed onto a conventional picture frame 12 by the consumer.

[20] It is an important feature for the present invention that the objects or pictures being stored 34 in the storage assembly 14 can be accessed without disturbing the picture 22 that is placed in the display area 20 of the picture frame 12. In the simplest embodiment the interior cavity 32 of the storage assembly 14 is accessed by sliding the storage assembly 14 relative to the frame 12 to access the interior cavity 32. Alternately, the storage assembly 14 may include an aperture 44 in the side wall 30 of the storage assembly 14 to allow access to the interior cavity 32. Further, to facilitate the storage of pictures 34 in a neat organized fashion a closure rail 46 may be provided that acts as a binder rail 46 to hold several photo display pages 34. The stack of photo display pages 34 is inserted through the aperture 44 in the side wall 30 of the storage assembly 14 into the interior cavity 32 for safe storage. The binder rail 46 also then serves as a closure element for the aperture 44 in the side wall 30. To enhance the appearance of the finished product the aperture 44 may include recessed seats at the opposing ends thereof to receive the ends of the binder rail 46, magnets may also be provided to assist in retaining the binder rail 46 in its closed position when placed in the seats in the aperture 44.

[21] The present storage assembly 14 is also useful to allow the use of a conventional picture frame 12 to form a shadow box type display. By simply omitting the photograph 22 and backer 26, a user can view the interior cavity 32 of the storage assembly 14 through the clear cover 24 located in the frame's 12 display aperture 20. In this manner, objects to be displayed are arranged in the interior cavity 32 of the storage assembly 14 and the frame 12 is slidably installed to form a shadow box type display.

[22] Turning now to Fig. 5, an alternate embodiment of the picture frame 112 and storage assembly 114 of the present invention is shown. In this embodiment, the conventional frame 112 construction is modified using a customized frame rail 118 extrusion. The frame rail 118 is extruded to include an integrally formed mounting rail 136. Further, the storage assembly 114 includes complementary mounting channels 138 formed along the edges thereof. In all other manners, this embodiment operates as described above. This particular embodiment 100 further illustrates that various decorative profiles 140 can be installed over the top of the extruded frame rail 118 to produce any desired appearance or color for the front surface of the picture frame 112.

[23] It can therefore be seen that the present invention provides a novel storage assembly 14 that can be used in conjunction with any conventional picture frame 12 construction either during manufacture and assembly or by the end user to facilitate convenient storage of various keepsakes or additional photographs. Further, the present invention provides for customization of the frame extrusion for incorporation into any conceivable picture frame configuration. For these reasons, the present

invention is believed to represent a significant advancement in the art, which has substantial commercial merit.

[24] While there is shown and described herein certain specific structure embodying the invention, it will be manifest to those skilled in the art that various modifications and rearrangements of the parts may be made without departing from the spirit and scope of the underlying inventive concept and that the same is not limited to the particular forms herein shown and described except insofar as indicated by the scope of the appended claims.